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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,189	11/20/2001	Hyun Jin Kim	EKM-77176	1221

7590 12/23/2003
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EXAMINER

DAVIS, ROBERT B

ART UNIT PAPER NUMBER

1722

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,189

Applicant(s)

KIM, HYUN JIN

Examiner

Robert B. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3/31/2003.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 10-12, 16, 17, 18 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese reference (08-300363A: figures 1-14).

The Japanese reference teaches a golf ball mold (1) made of a porous sintered metal (paragraph 10 of the machine translation attached to the reference). The mold has pores, which allow venting of gas from the molding cavity such as in figure 11, which feed escape passageways (20). The mold can be an injection mold or a press mold (see paragraph 28 of the English translation).

3. Claims 1-6, 8, 10-18, 21, 22 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue (5,849,237: figures 3-5, column 1, lines 12-14, column 2, lines 6-9; column 3, line 29 to column 4, line 7).

Inoue teaches a compression or injection mold for forming a golf comprising: a sintered porous metal alloy having a pore size of from preferably 5-15 microns, and a pressure source for increasing the fluid pressure at the molding surface to forcibly eject the golf ball from the mold cavity. The reference further teaches ejector and support pins formed of the porous material (column 3, lines 65-67). It is inherent that the mold having an overlapping pore size as claimed also has a porosity that falls between the

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ranges as claimed. Inoue also teaches a method of molding a golf ball using the porous mold and then applying fluid pressure from the outside of the mold to forcibly eject the molded article.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over either the Japanese reference or Inoue taken together with Hirzel (5,061,427; figure 4 and column 16, lines 7-12).

Each of the primary references discloses all claimed features except for the mold being made of porous aluminum.

Hirzel discloses a plastic shaping mold comprising a porous aluminum layer.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of either primary reference by using a porous aluminum mold making material as disclosed by Hirzel as aluminum was a well known porous mold forming material and an obvious selection based on the material being lightweight and having high strength and heat conduction properties.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over either the Japanese reference or Inoue taken together with About texturing.

Each of the primary references discloses all claimed features except for the mold being made of porous stainless steel.

About texturing discloses a mold comprising a porous stainless steel material.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of either primary reference by using a porous stainless steel mold making material as disclosed by About texturing as the reference states that the porous stainless steel provides venting of all gases.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese reference taken together with Shannon et al (6,422,850: figures 1-2c and column 3, lines 10-20).

The Japanese reference discloses a porous mold for the venting of gases from the mold cavity, but the reference does not disclose using vacuum to assist in the removal of the gasses.

Shannon et al disclose the use of vacuum to assist in the removal of gas from a golf ball mold so that plastic material can be more evenly distributed around a core.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of the Japanese reference by using vacuum to assist in venting a golf ball mold as disclosed by Shannon et al for the purpose of improving distribution of the plastic material around a golf ball core.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese reference taken together with Shannon et al as applied to claim 19 above,

and further in view of Inoue or Mold-Making Handbook (paragraph bridging pages 220-221 and figures 1a-1c).

The combination of the Japanese reference and Shannon et al disclose all claimed features except for the use of pressurized gas to eject the molded article.

Inoue discloses pressurized gas to remove a golf ball from a porous mold cavity.

Mold-Making Handbook discloses that a porous mold can be used to degas a mold and to use gas to eject a molded article.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of the Japanese reference by using gas to eject a molded article as disclosed by Inoue and Mold-Making Handbook as the use of the gas utilizes the porous mold without requiring ejector pins which reduces the cost of the apparatus.

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese reference taken together with Shannon et al (6,422,850: figures 1-2c and column 3, lines 10-20).

The Japanese reference discloses a process of molding a golf using porous mold for the venting of gases from the mold cavity, but the reference does not disclose using vacuum to assist in the removal of the gasses.

Shannon et al disclose the use of vacuum to assist in the removal of gas from a golf ball mold so that plastic material can be more evenly distributed around a core.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the process of the Japanese reference by using vacuum to assist in

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venting a golf ball mold as disclosed by Shannon et al for the purpose of improving distribution of the plastic material around a golf ball core.

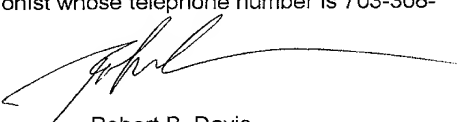
Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The remaining references show various golf molds.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert B. Davis whose telephone number is 571-272-1129. The examiner can normally be reached on Monday-Friday 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Robert B. Davis
Primary Examiner
Art Unit 1722

12/13/03